United States Department of Agriculture
Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Shallow Breaks (SwB), 7-9" P.Z., Green River and Great Divide Basins

Site ID: R034AY156WY

Major Land Resource Area: 34A-Cool Central Desertic Basins and Plateaus

Physiographic Features

This site is usually found in an upland position on gently sloping to very steep topography. It may be found on all exposures, but is primarily on south and west facing slopes.

Landform: Hill sides, ridges & escarpments **Aspect:** N/A

	Minimum	Maximum
Elevation (feet):	6000	7200
Slope (percent):	1	70
Water Table Depth (inches):	none within 60 inches	
Flooding:		
Frequency:	none	none
Duration:	none	none
Ponding:		
Depth (inches):	0	0
Frequency:	none	none
Duration:	none	none
Runoff Class:	negligible	moderate

Climatic Features

Annual precipitation ranges from 7-9 inches per year. Wide fluctuations may occur in yearly precipitation and result in more dry years than those with more than normal precipitation. Temperatures show a wide range between summer and winter and between daily maximums and minimums. This is predominantly due to the high elevation and dry air, which permits rapid incoming and outgoing radiation. Cold air outbreaks in winter move rapidly from northwest to southeast and account for extreme minimum temperatures. Extreme storms may occur during the winter, but most severely affect ranch operations during late winter and spring.

Daytime winds are generally stronger than nighttime and occasional strong storms may bring brief periods of high winds with gusts to more than 50 mph.

Growth of native cool season plants begins about April 15 and continues to about July 15. Some green up of cool season plants may occur in late September if moisture is available.

The following information is from the "Green River" climate station:

	Minimum	Maximum	5 yrs. out of 10 between
Frost-free period (days):	68	121	June 2 – September 5
Freeze-free period (days):	97	132	May 23 – September 19

Annual Precipitation (inches): <5.32 >9.34 (2 years in 10)

Average annual precipitation: 7.78 inches

Average annual air temperature: 41.8°F (25.6°F Avg. Min. to 58.1°F Avg. Max.)

For detailed information visit the Natural Resources Conservation Service National Water and Climate Center at http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=wy website. Other climate stations representative of this precipitation zone include "Bitter Creek", "Farson ", "Rock Springs FAA AP", and "Wamsutter" in Sweetwater County; "Church Buttes Gas PLT", and Mountain View" in Uinta County; "Fontenelle", "La Barge", and "Sage 4 NNW" in Lincoln County; and "Big Piney" in Sublette County.

Influencing Water Features

Wetland Description:	System	Subsystem	Class	Sub-class
None	None	None	None	None

Stream Type: None

Representative Soil Features

The soils of this site are generally less than 15 inches deep over sedimentary bedrock. This bedrock usually develops large cracks and crevices where junipers can utilize moisture. Included in this site are small areas of exposed bedrock and very shallow to deep pockets of soil. This site usually occurs on steep slopes, but may be on any slope.

Major Soil Series correlated to this site include: Huguston and Spool series.

Other Soil Series in MLRA 34 correlated to this site include: Rentsac and Blackhall series.

Parent Material Kind: residuum
Parent Material Origin: sandstone
Surface Texture: fine sandy loam, and loamy fine sand
Surface Texture Modifier: none
Subsurface Texture Group: fine sandy loam, loamy fine sand
Surface Fragments ≤ 3" (% Cover): 0 to 10
Surface Fragments > 3" (%Cover): 0
Subsurface Fragments ≤ 3" (% Volume): 0-10
Subsurface Fragments > 3" (% Volume): 0

	Minimum	Maximum
Drainage Class:	well	somewhat excessive
Permeability Class:	moderate	moderately rapid
Depth (inches):	8	15
Electrical Conductivity (mmhos/cm) ≤20":	0	8
Sodium Absorption Ratio ≤20":	0	5
Soil Reaction (1:1 Water) ≤20":	7.4	9.0
Soil Reaction (0.1M CaCl2) ≤20":	NA	NA
Available Water Capacity (inches) ≤30":	0.7	2.2
Calcium Carbonate Equivalent (percent) ≤20":	0	10

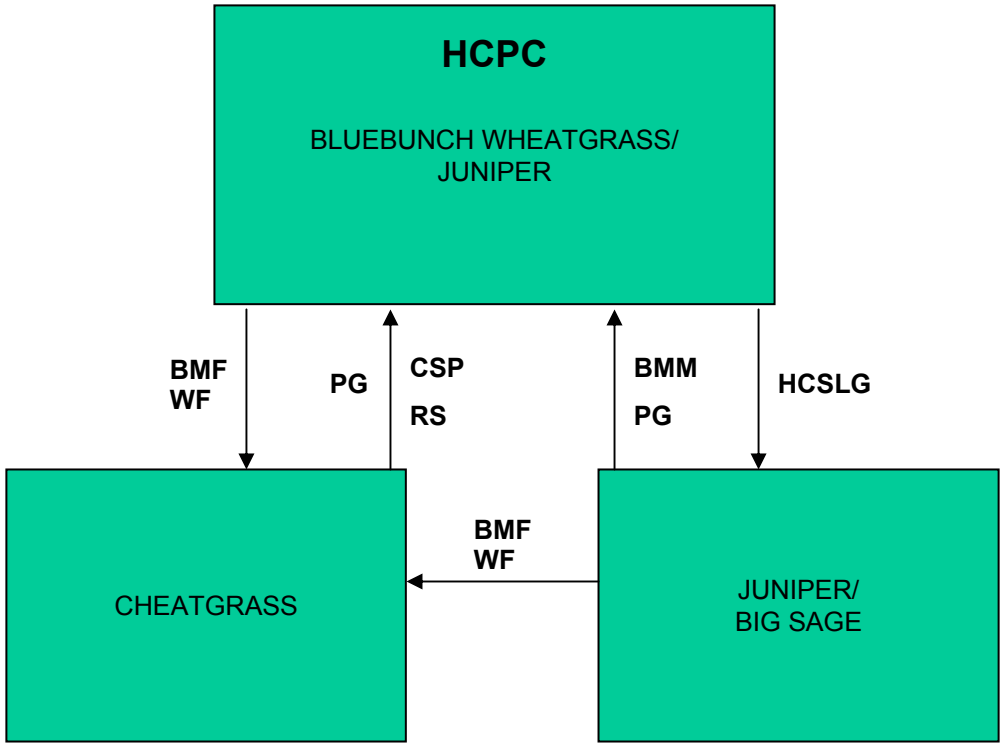
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates, species such as juniper and big sagebrush increase. Cheatgrass and annual forbs often invade. Cool season bunchgrasses such as bluebunch wheatgrass, Indian ricegrass, and needleandthread will decrease in frequency and production.

The Historic Climax Plant Community (description follows the plant community diagram) has been determined by study of rangeland relic areas, or areas protected from excessive disturbance. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures, and historical accounts have also been used.

The following is a State and Transition Model Diagram that illustrates the common plant communities (states) that can occur on the site and the transitions between these communities. The ecological processes will be discussed in more detail in the plant community narratives following the diagram.



BMA – Brush Management (all methods)
BMC – Brush Management (chemical)
BMF – Brush Management (fire)
BMM – Brush Management (mechanical)
CSP – Chemical Seedbed Preparation
CSLG – Continuous Season-long Grazing
DR – Drainage
CSG – Continuous Spring Grazing
HB – Heavy Browse
HCSLG – Heavy Continuous Season-long Grazing
HI – Heavy Inundation
LPG – Long-term Prescribed Grazing
MT – Mechanical Treatment (chiseling, ripping, pitting)
NF – No Fire
NS – Natural Succession
NWC – Noxious Weed Control
NWI – Noxious Weed Invasion
NU – Nonuse
P&C – Plow & Crop (including hay)
PG – Prescribed Grazing
RPT – Re-plant Trees
RS – Re-seed
SGD – Severe Ground Disturbance
SHC – Severe Hoof Compaction
WD – Wildlife Damage (Beaver)
WF - Wildfire

Plant Community Composition and Group Annual Production

Reference Plant Community (HCPC)

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Annual Production (Normal Year) Total: 800		
			Group	lbs./acre	% Comp.
GRASSES AND GRASS-LIKES					
GRASSES/GRASSLIKES					
Griffiths wheatgrass or	Elymus albicans	ELAL7	1	120 - 280	15 - 35
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6			
rhizomatous wheatgrass	Pascopyrum smithii	PASM	2	80 - 160	10 - 20
Indian ricegrass	Achnatherum hymenoides	ACHY	3	40 - 120	5 - 15
needleandthread	Hesperostipa comata	HECO26	4	40 - 120	5 - 15
MISC. GRASSES/GRASSLIKES			**5**	**40 - 120**	**5 - 15**
bottlebrush squirreltail	Elymus elymoides	ELEL5	5	0 - 40	0 - 5
Letterman needlegrass	Achnatherum nelsonii	ACLE9	5	0 - 40	0 - 5
needleleaf sedge	Carex duriuscula	CADU6	5	0 - 40	0 - 5
prairie junegrass	Koeleria macrantha	KOMA	5	0 - 40	0 - 5
Sandberg bluegrass	Poa secunda	POSE	5	0 - 40	0 - 5
other perennial grasses (native)		2GP	5	0 - 40	0 - 5
FORBS			**6**	**40 - 80**	**5 - 10**
asters	Eucephalus spp.	EUCEP2	6	0 - 40	0 - 5
buckwheats	Eriogonum spp.	ERIOG	6	0 - 40	0 - 5
clovers	Trifolium spp.	TRIFO	6	0 - 40	0 - 5
fleabane	Erigeron spp.	ERIGE2	6	0 - 40	0 - 5
goldenweed	Stenotus acaulis	STAC	6	0 - 40	0 - 5
Hoods phlox	Phlox hoodii	PHHO	6	0 - 40	0 - 5
milkvetches	Astragalus spp.	ASTRA	6	0 - 40	0 - 5
onion	Allium textile	ALTE	6	0 - 40	0 - 5
paintbrushes	Castilleja spp.	CAST	6	0 - 40	0 - 5
penstemons	Penstemon spp.	PENST	6	0 - 40	0 - 5
phacelias	Phacelia spp.	PHACE	6	0 - 40	0 - 5
pussytoes	Antennaria rosea	ANRO2	6	0 - 40	0 - 5
scarlet globemallow	Sphaeralcea coccinea	SPCO	6	0 - 40	0 - 5
stonecrop	Sedum spp.	SEDUM	6	0 - 40	0 - 5
western yarrow	Achillea lanulosa	ACHIL	6	0 - 40	0 - 5
other perennial forbs (native)		2FP	6	0 - 40	0 - 5
TREES/SHRUBS					
junipers	Juniperus scopulorum	JUSC2	7	200 - 360	25 - 45
MISC. SHRUBS			**8**	**40 - 80**	**5 - 10**
big sagebrush	Artemisia tridentata	ARTR2	8	0 - 40	0 - 5
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	8	0 - 40	0 - 5
limber pine	Pinus flexilis	PIFL2	8	0 - 40	0 - 5
low sagebrush	Artemisia arbuscula	ARAR8	8	0 - 40	0 - 5

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon precipitation or other climatic factors.

Plant Community Narratives

Following are the narratives for each of the described plant communities. These plant communities may not represent every possibility, but they probably are the most prevalent and repeatable plant communities. The plant composition tables shown above have been developed from the best available knowledge at the time of this revision. As more data is collected, some of these plant communities may be revised or removed, and new ones may be added. None of these plant communities should necessarily be thought of as "Desired Plant Communities". According to the USDA NRCS National Range and Pasture Handbook, Desired Plant Communities (DPC's) will be determined by the decision-makers and will meet minimum quality criteria established by the NRCS. The main purpose for including any description of a plant community here is to capture the current knowledge and experience at the time of this revision.

Bluebunch Wheatgrass/Juniper Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. This state evolved with grazing by large herbivores and is suited for grazing by domestic livestock. Potential vegetation is about 40% grasses or grass-like plants, 10% forbs, and 50% woody plants.
The major grasses include bluebunch wheatgrass, rhizomatous wheatgrass, Indian ricegrass, and needleandthread. Other grasses include Sandberg bluegrass, prairie junegrass, Letterman needlegrass, bottlebrush squirreltail, and needleleaf sedge. Juniper is the dominant woody plant. Other woody plants include low and Wyoming big sagebrush, limber pine, and green rabbitbrush.

A typical plant composition for this state consists of bluebunch wheatgrass 15-35%, rhizomatous wheatgrass 10-20%, Indian ricegrass 5-15%, needleandthread 5-15%, other grasses and grass-like plants 5-15%, perennial forbs 5-10%, juniper 25-45%, and 5-10% other woody species. Ground cover, by ocular estimate, varies from 10-20%.

The total annual production (air-dry weight) of this state is about 800 pounds per acre, but it can range from about 600 lbs./acre in unfavorable years to about 1100 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0401
Growth curve name: 7-9GR, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

The state is stable and well adapted to the Cool Central Desertic Basins and Plateaus climatic conditions. The diversity in plant species allows for high drought resistance. This is a sustainable plant community (site/soil stability, watershed function, and biologic integrity

Transitions or pathways leading to other plant communities are as follows:

- Heavy Continuous Season-Long Grazing will convert this plant community to the *Juniper/Big Sage State.*
- Wildfire or Prescribed Fire will convert this plant community to the *Cheatgrass State.*

Juniper/Big Sage Plant Community

This plant community is a result of frequent and severe grazing in the absence of fire or brush management. Juniper, Wyoming big sagebrush, and other woody species dominate this community, often exceeding 80% of the annual production. Rhizomatous wheatgrass and annual forbs make up the majority of the understory.

The total annual production (air-dry weight) of this state is about 400 pounds per acre, but it can range from about 300 lbs./acre in unfavorable years to about 700 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0401
Growth curve name: 7-9GR, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

Soil erosion is accelerated because of increased bare ground. The biotic community has been compromised, but is relatively stable. The watershed is functioning, but is at risk of further degradation. Water flow patterns and pedestals are obvious. Infiltration is reduced and runoff is increased.

Transitional pathways leading to other plant communities are as follows:

- Mechanical Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will return this state to near *Historic Climax Plant Community (Bluebunch Wheatgrass/Juniper State).* Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.
- Wildfire or Prescribed Fire will convert this plant community to the *Cheatgrass State.*

Cheatgrass Plant Community
This plant community is the result of wildfire or a hot prescribed fire. Dominant species include green rabbitbrush and rhizomatous wheatgrass. Cheatgrass often invades, on south and west facing slopes in particular, effectively increasing the fire frequency and preventing the re-establishment of non-sprouting woody species.

The total annual production (air-dry weight) of this state is about 100 pounds per acre, but it can range from about 50 lbs./acre in unfavorable years to about 350 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0401
Growth curve name: 7-9GR, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

The state is vulnerable to excessive erosion. The biotic integrity of this plant community is at risk depending on how far a shift has occurred in plant composition toward green rabbitbrush, cheatgrass, and annual forbs. The watershed is at risk as bare ground increases.

Transitional pathways leading to other plant communities are as follows:

- Chemical Seedbed Preparation and Re-seeding followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will return this plant community to near *Historic Climax Plant Community (Bluebunch Wheatgrass/Juniper State)* although cheatgrass will remain a part of the plant community. Additional deferment may be necessary and should be prescribed on an individual site basis.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Bluebunch Wheatgrass/Juniper Plant Community (HCPC): This plant community provides excellent thermal and escape cover for wintering mule deer and elk. Year-round habitat is provided for mule deer, bobcat, cottontail rabbits, jackrabbits, sage grouse and many other birds such as the black-throated sparrow, lark sparrow, green-tailed towhee, and neotropical migrants. Juniper provides good thermal cover and nesting habitat for many bird species.

Juniper/Big Sage Plant Community: This plant community may be useful for the same wildlife that would use the Historic Climax Plant Community. However, the plant community composition is less diverse, and thus, less apt to meet the seasonal needs of these animals.

Cheatgrass Plant Community: This plant community exhibits a low level of plant species diversity. It is not a desirable plant community to select as a wildlife habitat management objective.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occuring plants in MLRA34A, 7-9 inch Green River & Great Divide Basins

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	*Cattle*	*Sheep*	*Horses*	*Mule Deer*	*Antelope*	*Elk*
GRASSES/GRASSLIKES								
Alkali bluegrass	Poa juncifolia (syn. P. secunda)	POJU (POSE)	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD
Alkali muhly	Muhlenbergia asperifolia	MUAS	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Alkali sacaton	Sporobolus airoides	SPAI	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Baltic rush	Juncus balticus	JUBA	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Basin wildrye	Leymus cinereus	LECI4	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Bluejoint reedgrass	Calamagrostis canadensis	CACAM	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP
Bottlebrush squirreltail	Elymus elymoides	ELELE	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Canada wildrye	Elymus canadensis	ELCA4	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Canby bluegrass	Poa canbyi (syn. to Poa secunda)	POCA (POSE)	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Indian ricegrass	Achnatherum hymenoides	ACHY	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Inland saltgrass	Distichlis spicata	DISP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Inland sedge	Carex interior	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
James' galleta	Pleuraphis jamesii	PLJA	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Letterman needlegrass	Achnatherum lettermanii	ACLE9	PPPP	PPPP	DDDD	DDDD	DDDD	PPPP
Mat muhly	Muhlenbergia richardsonis	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nebraska sedge	Carex nebrascensis	CANE2	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Needleandthread	Hesperostipa comata	HECO26	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Needleleaf sedge	Carex duriuscula	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Northern reedgrass	Calamagrostis stricta ssp. inexpansa	CASTI3	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP
Nuttall's alkaligrass	Puccinellia nuttalliana	PUNU2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Plains reedgrass	Calamagrostis montanensis	CAMO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Prairie junegrass	Koeleria macrantha	KOMA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Reed canarygrass	Phalaris arundinacea	PHAR3	PPPP	UUUU	UUUU	UUUU	UUUU	PPPP
Saline wildrye	Leymus salinus	LESA4	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Sandberg bluegrass	Poa secunda	POSE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Sand dropseed	Sporobolus cryptandrus	SPCR	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Slender wheatgrass	Elymus trachycaulus	ELTR7	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Tall mannagrass	Glyceria elata (syn. G. striata)	GLEL (GLST)	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Thickspike wheatgrass	Elymus lanceolatus ssp. lanceolatus	ELLAL	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Threadleaf sedge	Carex filifolia	CAFI	DDDD	DDDD	DDDD	DDDD	PPPP	DDDD
Threeawns	Aristida spp.	ARIST	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Tufted hairgrass	Deschampsia caespitosa	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Western wheatgrass	Pascopyrum smithii	PASM	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
FORBS								
American licorice	Glycyrrhiza lepidota	GLLE3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Arrowgrass	Triglochin spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Asters	Eucephalus spp.	EUCEP2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Biscuitroot	Lomatium spp.	LOMAT	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Blue-eyed grass	Sisyrinchium spp.	SISYR	DDDD	PPPP	DDDD	DDDD	DDDD	DDDD
Buckwheats	Eriogonum spp.	ERIOG	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU
Buttercup	Ranunculus spp.	RANUN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Clovers	Trifolium spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Deathcamas	Zigadenus spp.	ZIGAD	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Docks	Rumex spp.	RUMEX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Elephanthead lousewort	Pedicularis groenlandica	PEGR2	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU
Flax	Linum spp.	LINUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fleabanes	Erigeron spp.	ERIGE2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fringed sagewort	Artemisia frigida	ARFR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenpea	Thermopsis spp.	THERM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenweed	Stenotus acaulis	STAC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Gromwell	Buglossoides arvensis	BUAR3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Groundsel	Tephroseris spp.	TEPHR3	TTTT	UUUU	TTTT	UUUU	UUUU	TTTT
Hawksbeard	Crepis acuminata	CRAC2	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU
Horsetails	Equisetum spp.	EQUIS	UUUU	UUUU	TTTT	UUUU	UUUU	UUUU
Iris	Iris spp.	IRIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Milkvetch (locoweed)	Astragalus spp.	ASTRA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Miners candle	Cryptantha virgata	CRVI4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Paintbrush	Castilleja spp.	CAST	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Penstemons	Penstemon spp.	PENST	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Phlox	Phlox spp.	PHLOX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Povertyweed	Monolepis spp.	MONOL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Primrose	Oenothera	OENOT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Princesplume	Stanleya spp.	STANL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Pussytoes	Antennaria spp.	ANTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sagebrush gilia	Leptodactylon pungens	LEPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sandwort	Arenaria spp.	ARENA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Scarlet globemallow	Sphaeralcea coccinea	SPCO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Scurfpeas	Psoralea spp.	PSORA2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stonecrop	Sedum spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Tansy	Tanacetum spp.	TANAC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Toadflax	Comandra umbellata	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Violets	Viola spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Water hemlock	Cicuta spp.	CICUT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Waterleaf	Hydrophyllum spp.	HYDRO4	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD
Western yarrow	Achillea millefolium	ACMIO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Wild onion	Allium textile	ALTE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Woody aster	Xylorhiza spp.	XYLOR	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
TREES, SHRUBS & HALF-SHRUBS								
Antelope bitterbrush	Purshia tridentata	PUTR2	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP
Big sagebrush	Artemisia tridentata	ARTR2	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Birdfoot sagebrush	Artemisia pedatifida	ARPE6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Bud sagewort	Artemesia spinescens	ARSP5	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP
Buffaloberry	Shepherdia spp.	SHEPH	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Cottonwood (sprouts only)	Populus angustifolia	POAN3	PPPP	PPPP	PPPP	PPPP	UUUU	PPPP
Currant	Ribes spp.	RIBES	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD
Early(alkali) sagebrush	Artemisia arbuscula ssp. longiloba	ARARL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fourwing saltbush	Atriplex canescens	ATCA2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Gardners saltbush	Atriplex gardneri	ATGA	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Greasewood (toxic in large amounts)	Sarcobatus vermiculatus	SAVE4	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Greenmolly summercypress	Kochia americana	KOMA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	DDDD	DDDD	UUUU	PPPP	PPPP	DDDD
Hawhorn	Crataegus spp.	CRATA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Junipers	Juniperus scopulorum	JUSC2	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU
Limber pine	Pinus flexilis	PIFL2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Low sagebrush	Artemisia arbuscula	ARAR8	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Rubber rabbitbrush	Ericameria nauseosa	ERNA10	UUUU	DDDD	UUUU	DDDD	PPPP	UUUU
Shadscale	Atriplex confertifolia	ATCO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Shrubby cinquefoil	Dasiphora floribunda	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Silver sagebrush	Artemisia cana	ARCA13	DDDD	DDDD	DDDD	PPPP	PPPP	DDDD
Skunkbush sumac	Rhus trilobata	RHTR	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Spineless horsebrush	Tetradymia canescens	TECA2	UUUU	TTTT	UUUU	UUUU	UUUU	UUUU
Spiny hopsage	Grayia spinosa	GRSP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Spiny horsebrush	Tetradymia spinosa	TESP2	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU
Wildrose	Rosa woodsii var. woodsii	ROWOW	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Willows	Salix spp.	SALIX	DDDD	DDDD	DDDD	PPPP	UUUU	DDDD
Winterfat	Krascheninnikovia lanata	KRAL2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP

N = not used; U = undesirable; D = desirable; P = preferred; T = toxic

Animal Community – Grazing Interpretations

The following table lists suggested stocking rates for cattle under continuous season-long grazing under normal growing conditions. These are conservative estimates that should be used only as guidelines in the initial stages of the conservation planning process. Often, the current plant composition does not entirely match any particular plant community (as described in this ecological site description). Because of this, a field visit is recommended, in all cases, to document plant composition and production. More precise carrying capacity estimates should eventually be calculated using this information along with animal preference data, particularly when grazers other than cattle are involved. Under more intensive grazing management, improved harvest efficiencies can result in an increased carrying capacity. If distribution problems occur, stocking rates must be reduced to maintain plant health and vigor.

Plant Community	Production (lb./ac)	Carrying Capacity* (AUM/ac)
Bluebunch Wheatgrass/Juniper (HCPC)	600-1100	.1
Juniper/Big Sage	300-700	.08
Cheatgrass	50-350	.02

* - Continuous, season-long grazing by cattle under average growing conditions.

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area may provide yearlong forage for cattle, sheep, or horses. During the dormant period, the forage for livestock use needs to be supplemented with protein because the quality does not meet minimum livestock requirements.

Hydrology Functions

Water is the principal factor limiting forage production on this site. This site is highly variable and is dominated by soils in hydrologic group B and C, with localized areas in hydrologic group D. Infiltration ranges from slow to very rapid. Runoff potential for this site varies from moderate to high depending on soil hydrologic group, depth to and permeability of bedrock, slope, and ground cover (refer to Part 630, NRCS National Engineering Handbook for detailed hydrology information.)

Rills and gullies may be present, but should be small. Water flow patterns should be barely distinguishable. Pedestals are only slightly present in association with bunchgrasses such as bluebunch wheatgrass. Litter typically falls in place, and signs of movement are not common. Chemical and physical crusts are rare to non-existent. Cryptogrammic crusts are present, but only cover 1-2% of the soil surface.

Recreational Uses

This site provides hunting opportunities for upland game species. Variable topography, rock outcrop, and juniper trees appeal to hikers.

Wood Products

Limber pine and juniper may be used for firewood and very limited use for fence posts.

Other Products

None noted.

Supporting Information

Associated Sites

Shallow Loamy	R034AY162WY
Shallow Clayey	R034AY158WY
Very Shallow	R034AY176WY

Similar Sites

R034AY256WY – Shallow Breaks (SwB) 10-14W has higher production.
R034AY176WY – Very Shallow (VS) 7-9GR has lower production, and junipers are limited to higher elevations.

Inventory Data References (narrative)

Information presented here has been derived from NRCS clipping data and other inventory data. Field observations from range trained personnel were also used. Those involved in developing this site include: Bill Christensen, Range Management Specialist, NRCS; Karen Clause, Range Management Specialist, NRCS; and Everet Bainter, Range Management Specialist, NRCS. Other sources used as references include: USDA NRCS Water and Climate Center, USDA NRCS National Range and Pasture Handbook, and USDA NRCS Soil Surveys from various counties.

Inventory Data References

Data Source	Number of Records	Sample Period	State	County
SCS-RANGE-417	50	1966-1985	WY	Sweetwater & others

State Correlation

Type Locality

Field Offices

Baggs, Cokeville, Rock Springs/Farson, Lyman, Pinedale, Saratoga

Relationship to Other Established Classifications

Other References

Site Description Approval

_____ _____
State Range Management Specialist Date